

**POLYMERIZATION PROCESS USING METALLOCENE CATALYST SYSTEMS****ABSTRACT OF THE DISCLOSURE**

The present invention relates to a polymerization process using improved metallocene catalyst systems. Specifically, the catalyst systems of the present invention relate to a metallocene compound having optimized metals loading and activator concentration, and demonstrate improved operability and productivity. In an exemplary embodiment, the improved metallocene catalyst system of the present invention comprises a metallocene catalyst compound activated by methylaluminoxane, and a support material, the methylaluminoxane being present in the range of from 3 to 9 mmole methylaluminoxane per gram of support material, and the metallocene being present in the range of from 0.01 to 1.0 mmole metallocene per gram of support material.